REMARKS

Claims 1-16 are pending in the present application. The Office Action and cited references have been considered. Favorable reconsideration is respectfully requested.

Claims 1-16 were rejected under 35 U.S.C. § 112, second paragraph, as being allegedly indefinite in a number of stated ways. Applicants have amended the claims to overcome these objections. Withdrawal thereof is respectfully requested.

Claims 1, 6-8 and 13-16 are rejected under 35 U.S.C. § 103 as being unpatentable over Stumer (U.S. Patent Publication No. 2002/0064271 A1). This rejection is respectfully traversed.

Claim 1 recites a method for utilizing shared resources in a computerized system, with the aid of a processor for processing a plurality of commands to be executed using two or more of the shared resources, wherein at least one command of the plurality comprises two or more sub-commands to be executed at different the two or more shared resources. The method includes, deriving, from each of the plurality of commands, subcommands respectively related to the shared resources, assigning priorities to the subcommands, and forwarding the subcommands to one or more queues of the respective two or more shared resources, so that each of the queues comprises the subcommands related to a particular shared resource. In this way, execution of the subcommands is assured from the queues by the shared resources in an asynchronous manner, and according to the subcommand priorities by each of the shared resources. This is not taught, disclosed or made obvious by the prior art of record.

The Examiner contends that Stumer discloses all features of Claim 1 except for using queues. Applicants respectfully submit that a command as claimed in the present invention) is not equivalent to a routine as disclosed in Stumer. In particular, to execute a command according to Claim 1, all its sub-commands are to be executed; while in Stumer, when executing a program (i.e., a routine), only some of its subroutines are to be executed, depending on numerous logical conditions. See e.g., Fig. 7A and paragraph [0037]. However, to clarify the differences between the solution proposed in the present invention and Stumer, Claim 1 has been amended to recite a method which includes executing a plurality of commands wherein at least one command of the plurality comprises two or more component sub-commands to be executed at different ones of the two or more shared resources for executing the command.

In this connection, and referring particularly to the rejection under 35 U.S.C. § 112, second paragraph as set forth in Section 2 of the Office Action, Applicants note that the command in the present application (at least one of the plurality of commands) is executed using different shared resources, while the sub-commands are executed at or by the respective shared resources.

In comparison with the above idea, Stumer (even if one considers, for the sake of argument only, that the routine to be somehow similar to a command) discloses only one routine (program) which, for its execution, does not require execution of all its subroutines since they are optional and one of them can either be executed or not depending on additional conditions (NRCR_TYPE variable, paragraph [0037]). Moreover, Stumer discloses using one and the same shared resource (database) by all its mentioned subroutines. Further, it is

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also important to note that Stumer's subroutines <u>do not have</u>
<u>different priorities</u>: the priorities in Stumer are stated by
one of the subroutines <u>for activating the outer NRCR system</u>
<u>(paragraph [0049])</u>, <u>and not for any order of execution the</u>
<u>subroutines</u>.

In the Office Action (page 4), the Examiner contends
that Stumer teaches storing data such as priority and
instructions (functions and subroutines) in a database (shared
resource) and a memory register. However, in contrast,
according to Applicants' claimed invention, <u>sub-commands are</u>
<u>executed (and not stored)</u> by the shared resources. The shared
resources of the present claimed invention do not store
priorities as well.

The "Official Notice" asserted by the Examiner (page 4)
states that "storing with queues as a data structure" is
obvious. Applicants respectfully submit that this "Official
Notice," whether or not appropriate, is irrelevant to Claim 1,
since (at least upon the amendment) claim 1 recites executing
sub-commands at the shared resources, and not storing thereof.

For at least these reasons, claim 1 is patentable
over the cited prior art.

The Office Action contends that claim 6 is obvious
since Stumer teaches "reports" (monitoring and statistics
unit) relating to said commands (Abstract). Upon the
clarifying amendment of Claim 6, it seems clear that the cited
Stumer's "reports" are completely irrelevant to the claimed
reports that relate to execution of the sub-commands. Claim 6
is therefore patentable at least as being dependent form
amended Claim 1.

Claims 7 and 8 are believed to be patentable in and
of themselves, and as they depend from and include the

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recitations of Claim 1, which is patentable for the reasons discussed above.

In Section 8, in connection with Claim 13, the Examiner asserts that Stumer teaches using memory buffers. However, Applicants respectfully submit that paragraphs [0031] and [0034] of Stumer have nothing in common with queues or buffers for sub-commands. Claim 13 is therefore novel and non-obvious.

Section 9, in connection with Claim 14 of the Office Action does not provide an indication where Stumer discloses a buffer of a shared resource, which would perform sorting of sub-commands by priorities. Applicants respectfully submits that Claim 14 is novel and non-obvious in and of itself and as it depends from and includes the recitations of Claim 1, which is patentable for the reasons discussed above.

Claims 15 and 16 are believed to be patentable in and of themselves, and as they depend from an include the recitations of Claim 8, which is patentable at least for the reasons discussed above with respect to Claim 1.

Claims 2-5 and 11-12 are rejected under 35 U.S.C. § 103 as being unpatentable over Stumer, in view of Cota-Robles (U.S. Patent Publication No. 2001/0056456 A1). This rejection is respectfully traversed. Cota-Robles describes assigning priorities to a program or executable code ("thread") within the program so that to allow an operational system (OS) determining when and for how long the program (the thread) is granted access to the processor. However, Applicants respectfully submit that Claim 1 has been amended and Stumer does not teach or suggest the invention recited in Claim 1, and Cota-Robles does not remedy the deficiencies noted above with respect to Stumer. In particular, Cota-Robles does not discuss sub-commands of a particular command and priorities of

the sub-commands in the shared resources. For at least this reason, Applicants respectfully submit that Claims 2-5 and 11-12 are patentable in and of themselves, and for the reasons discussed above with respect to claim 1.

Moreover, with respect to Claim 5, the Office Action cites Stumer's disclosure at paragraph [0049]. However, the priorities mentioned in the cited paragraph have nothing in common with the priorities of sub-commands claimed in the invention. Applicant's arguments discussed above are applicable here: Stumer's <u>do not have different priorities</u>, the priorities in Stumer are stated by one of the subroutines <u>for activating the outer NRCR system ([0049]), and not for any order of execution the subroutines.</u> Moreover, Stumer does not propose any combined priorities based on a priority of subcommand and the command itself. Therefore, Claim 5 is patentable over the prior art, whether taken alone or as proposed in the Office Action.

Claims 9-10 are rejected under 35 U.S.C. § 103 as being unpatentable over Stumer in view of Aucsmith et al. (U.S. 6,243,793 B1). This rejection is respectfully traversed.

Aucsmith's master processor coordinates operation of slave processors, but it does not distribute commands there-between (as in the present application). Aucsmith's slave processors must receive from the master processor a permission for access to shared resources. It is not the way of operation as claimed in Applicants Claims 9 and 10. In Claims 8 and 10, a high level (master) processor distributes commands with different priorities between lower level processors, and thus performs automatic control of the access to the shared resources. This way is faster and more effective than that disclosed by Aucsmith. For at least this reason, Applicants

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respectfully submit that Claims 9 and 10 are patentable in and of themselves and as they depend from and include the recitations of Claim 8, which is patentable for the reasons discussed above.
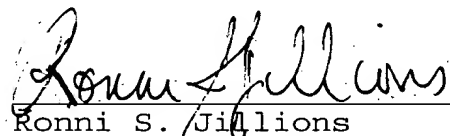
In view of the above amendments and remarks, Applicants respectfully request reconsideration and withdrawal of this rejection. Applicants submit that the application is in condition for allowance and early notice to this effect is most earnestly solicited.

If the Examiner has any questions, he is invited to contact the undersigned at 202-628-5197.

Respectfully submitted,

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